

**IN THE CLAIMS:**

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. When ~~strikethrough~~ cannot easily be perceived, or when five or fewer characters are deleted, ] are used to show the deletion. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 34, 35, 36, 37, 38, 39, 41, 43 and 44 in accordance with the following:

1. (Currently amended) An optical switch having a plurality of switch cells, wherein:
  - said optical switch has  $n$  inputs ( $n$  is a natural number) and  $m$  outputs ( $m$  is a natural number);
    - said optical switch has a unit size defined as the distance between any two adjacent ones of said switch cells;
    - said optical switch comprises:
      - a substrate having a switch size of  $K \times L$  ( $K$  is an integer satisfying  $n-K \leq n \leq K$ , and  $L$  is an integer satisfying  $m-L \leq m \leq L$ );
        - first and second mirrors parallel to each other and perpendicular to a principal surface of said substrate; and
        - an optical unit including a plurality of input optical paths for said  $n$  inputs and a plurality of output optical paths for said  $m$  outputs, said plurality of input optical paths being inclined relative to said first and second mirrors, said plurality of output optical paths being inclined relative to said first and second mirrors; and
        - each of said switch cells comprises a switch mirror provided movably relative to said substrate, wherein  
said switch mirror can switch between a first condition where incident light passes over the switch mirror and a second condition where incident light is reflected by the switch mirror.

2-33. (CANCELLED)

34. (Currently amended) An optical switch comprising:

a plurality of optical path switching means to arbitrarily guide light from a plurality of input ports to a plurality of output ports, each of said plurality of optical path switching means including a movable optical reflecting member; and

reflecting means for reflecting light from said input ports or light from said movable optical reflecting member toward said output ports or said movable optical reflecting members, wherein

each of said movable optical reflecting members can switch between a first condition where incident light passes over the movable optical reflecting member and a second condition where incident light is reflected by the movable optical.

35. (Currently amended) An optical switch comprising:

a plurality of optical path switching means to arbitrarily guide light from a plurality of input ports to a plurality of output ports, each of said plurality of optical path switching means including a movable optical reflecting member; and

reflecting means on opposite sides of said movable optical reflecting member for reflecting light from said input ports or light from said movable optical reflecting member toward said output ports or said movable optical reflecting member, wherein

the optical path lengths from said input ports to said output ports are equal, and  
said movable optical reflecting member can switch between a first condition where  
incident light passes over the movable optical reflecting member and a second condition where  
incident light is reflected by the movable optical reflecting member.

36. (Currently amended) An optical switch comprising:

a plurality of optical path switching means arranged to arbitrarily guide light from a plurality of input ports to plurality of output ports, each of said plurality of optical path switching means including a movable optical reflecting member; and

reflecting means on opposite sides of said movable optical reflecting member for reflecting light from said input ports or light from said movable optical reflecting member toward said output ports or said movable optical reflecting member, wherein

the optical losses from said input ports to said output ports are equal, and

said movable optical reflecting member can switch between a first condition where incident light passes over the movable optical reflecting member and a second condition where incident light is reflected by the movable optical reflecting member.

37. (Currently amended) An optical switch comprising:

a plurality of optical input ports;

a plurality of output ports;

a plurality of optical path switching means provided between said plurality of optical input ports and said plurality of optical output ports, each of said plurality of optical path switching means including a movable optical reflecting member; and

reflecting means provided outside of said plurality of optical path switching means between said plurality of optical input ports and said plurality of optical output ports for reflecting light from said optical input ports or light from said optical path switching means, wherein

said movable optical reflecting member can switch between a first condition where incident light passes over the movable optical reflecting member and a second condition where incident light is reflected by the movable optical reflecting member.

38. (Currently amended) An optical switch comprising:

a plurality of optical input ports;

a plurality of optical output ports;

a plurality of optical path switching means provided between said plurality of optical input ports and said plurality of optical output ports, each of said plurality of optical path switching means including a movable optical reflecting member; and

reflecting means provided between said plurality of optical input ports and said plurality of optical output ports so as to interpose said plurality of optical path switching means for reflecting light from said optical input ports or light from said optical path switching means, wherein

said movable optical reflecting member can switch between a first condition where incident light passes over the movable optical reflecting member and a second condition where incident light is reflected by the movable optical reflecting member.

39. (Currently amended) An optical switch comprising:

a plurality of optical input ports;  
a plurality of optical output ports;  
a plurality of optical path switching means provided between said plurality of optical input ports and said plurality of optical output ports, each of said plurality of optical path switching means including a movable optical reflecting member;

reflecting means on opposite sides of said movable optical reflecting member for reflecting light from said input ports or light from said optical reflecting member toward said output ports or said optical reflecting member; and

optical inputs from said optical input ports to adjacent ones of said optical path switching means crossing each other in direction, wherein

said movable optical reflecting member can switch between a first condition where incident light passes over the movable optical reflecting member and a second condition where incident light is reflected by the movable optical reflecting member.

40. (CANCELLED)

41. (Currently amended) An optical switch comprising:

a plurality of optical input ports;  
a plurality of optical output ports; and

a plurality of optical path switching means provided between said plurality of optical input ports and said plurality of optical output ports, each of said plurality of optical path switching means including a movable optical reflecting member; and

reflecting means on opposite sides of said movable optical reflecting member for reflecting light from said input ports or light from said movable optical reflecting member toward said optical output ports or said movable optical reflecting member, wherein

adjacent ones of said optical path switching means for receiving light from said optical input ports are reversed to each other, and

said movable optical reflecting member can switch between a first condition where incident light passes over the movable optical reflecting member and a second condition where incident light is reflected by the movable optical reflecting member.

42. (CANCELLED)

43. (Currently amended) An optical switch, including optical input ports and optical output ports, comprising:

a plurality of optical path switches, between the optical input ports and the optical output ports, each including a movable optical reflecting member; and

a pair of mirrors on opposite sides of the movable optical reflecting member to reflect light from the optical input ports and from the movable optical reflecting member toward the optical output ports and the movable optical reflecting member, wherein

said movable optical reflecting member can switch between a first condition where incident light passes over the movable optical reflecting member and a second condition where incident light is reflected by the movable optical reflecting member.

44. (Currently amended) An optical switch, including optical input ports and optical output ports, comprising:

a plurality of optical path switches, between the optical input ports and the optical output ports, each including a movable optical reflecting member; and

a pair of mirrors on opposite sides of the movable optical reflecting member to reflect light from the optical input ports and from the movable optical reflecting member toward the optical output ports and the movable optical reflecting member, wherein

the optical patch switches, which are connected to the optical input ports, are alternately inverted in logic; and

- the optical patch switches, which are connected to the optical output ports, are alternately inverted in logic, and

said movable optical reflecting member can switch between a first condition where incident light passes over the movable optical reflecting member and a second condition where incident light is reflected by the movable optical reflecting member.